

**REMARKS**

The Official Action mailed July 31, 2007, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on February 20, 2004; October 11, 2005; October 30, 2006; and May 8, 2004.

A further Information Disclosure Statement was submitted on July 20, 2007 (received by OIPE July 23, 2007), and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1-9 and 11-27 were pending in the present application prior to the above amendment. The Applicant notes with appreciation the allowance of claims 12-14 and 24-27 (Box 5, Office Action Summary; page 12, Paper No. 20070722). New dependent claims 61 and 62 have been added to recite additional protection to which the Applicant is entitled. Accordingly, claims 1-9, 11-27, 61 and 62 are now pending in the present application, of which claims 1, 6, 9, 12, 15, 20 and 24 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 1, 4-6, 15 and 16 as obvious based on the combination of U.S. Publication No. 2003/0032210 to Takayama and U.S. Publication No. 2002/0146893 to Shimoda. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or

references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 1, 6 and 15 recite a thin film integrated circuit comprising, among other features, a memory comprising a first semiconductor film over an insulating film, and a transistor comprising a second semiconductor film, a gate insulating film, and a gate electrode which are provided over the insulating film. Also, claim 6 recites an IC label comprising the thin film integrated circuit, and claim 15 recites a container comprising the thin film integrated circuit. For the reasons provided below, Takayama and Shimoda, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action concedes that "Takayama fails to explicitly disclose a memory comprising a first semiconductor film" and asserts that Shimoda teaches these features (page 3, Paper No. 20070722). Specifically, the Official Action asserts that "Shimoda discloses a first semiconductor film used as a memory (within film layer 4, paragraph [0119])" (Id.). The Applicant respectfully disagrees and traverses the assertions in the Official Action.

Shimoda merely appears to describe the following: "The purpose for forming the transferred layer 4 ... are not limited, and it is preferable that the transferred layer be a thin film, and particularly a functional thin film or thin film device. Examples of functional

thin films and thin film devices include ... memories; ... semiconductor thin films ...” (paragraph [0119]). That is, Shimoda merely independently discloses memories and semiconductor thin films as examples of functional thin films and thin film devices. It does not appear that Shimoda discloses a memory comprising a semiconductor film. Therefore, the Applicant respectfully submits that Shimoda does not cure the deficiencies in Takayama.

Also, claims 1, 6 and 16 recite a memory comprising a first semiconductor film over an insulating film, and a transistor comprising a second semiconductor film over the insulating film. Even if one were to combine Takayama and Shimoda, the Applicant respectfully submits that the above-referenced features are not taught or suggested by the prior art of record.

Further, regarding claims 6 and 15, without any specific references to Takayama in support, the Official Action broadly asserts that “Takayama discloses an IC label” (page 3, Paper No. 20070722) and that “Takayama discloses a container” (page 4, *Id.*) with numerous references to features shown in Figures 9A to 9D (*i.e.* pages 2-4). However, Figures 9A to 9D of Takayama clearly show steps of manufacturing a liquid crystal display device (see page 16, paragraph [0242] to page 17, paragraph [248]). Additionally, Figure 19A of Takayama appears to show a portable telephone and Figure 19B of Takayama appears to show a portable book (page 23, paragraphs [0322]-[0333]). The Applicant respectfully submits that Takayama does not teach or suggest an IC label or a container.

Therefore, the Applicant respectfully submits that Takayama and Shimoda, either alone or in combination, do not teach or suggest a thin film integrated circuit comprising, among other features, a memory comprising a first semiconductor film over an insulating film, and a transistor comprising a second semiconductor film, a gate insulating film, and a gate electrode which are provided over the insulating film; an IC label comprising the thin film integrated circuit; or a container comprising the thin film integrated circuit.

Since Takayama and Shimoda do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects dependent claims 2 and 3 as obvious based on the combination of Takayama, Shimoda and U.S. Patent No. 6,703,267 to Tanabe. The Official Action rejects dependent claims 7, 8, 18 and 19 as obvious based on the combination of Takayama, Shimoda and U.S. Patent No. 6,885,032 to Forbes. Please incorporate the arguments above with respect to the deficiencies in Takayama and Shimoda. Tanabe or Forbes does not cure the deficiencies in Takayama and Shimoda. The Official Action relies on Tanabe or Forbes to allegedly teach the features of the dependent claims. Specifically, the Official Action relies on Tanabe to allegedly teach a thin film integrated circuit device with a metal oxide as WO<sub>2</sub> or WO<sub>3</sub> (page 6, Paper No. 20070722), and on Forbes to allegedly teach an IC label as contactless type, that a surface of the IC label can be printed, that a thin film integrated circuit is held between a first label and a second label affixed to the thin film integrated circuit with an adhesive agent and a metal oxide adhered to the container (page 7, *Id.*). However, Takayama, Shimoda and Tanabe or Forbes, either alone or in combination, do not teach or suggest the following features or that Takayama and Shimoda should be modified to include any of the following features: a thin film integrated circuit comprising, among other features, a memory comprising a first semiconductor film over an insulating film, and a transistor comprising a second semiconductor film, a gate insulating film, and a gate electrode which are provided over the insulating film; an IC label comprising the thin film integrated circuit; or a container comprising the thin film integrated circuit. Also, as noted in detail below, the Applicant respectfully submits that the Official Action has not set forth sufficient reason to combine Forbes with Takayama and Shimoda. Since Takayama, Shimoda and Tanabe or Forbes do not teach or suggest all the claim limitations and since there is insufficient reason to combine Takayama, Shimoda and

Tanabe or Forbes, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects claims 9, 11, 20, 21 and 23 as obvious based on the combination of Takayama, Shimoda, Forbes and U.S. Publication No. 2004/0256644 to Kugler. In the wake of the recent Supreme Court decision of KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727 (2007), the PTO's Deputy Commissioner for Patent Operations issued on May 3, 2007, a memorandum to all Technology Center Directors ("May 3, 2007 Memo") noting that "a showing of 'teaching, suggestion, or motivation' to combine the prior art to meet the claimed invention could provide a helpful insight in determining whether claimed subject matter is obvious under 35 U.S.C. § 103(a)." However, whatever test for obviousness may be employed, "the analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and it [is] 'important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements' in the manner claimed." (May 3, 2007 Memo; emphasis added). Thus, the law still requires a reason for combining references (e.g., a benefit), and that reason must have "rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988 (Fed.Cir. 2006) (cited with approval in KSR, 127 S.Ct. 1727). Against this legal backdrop, the Applicant respectfully submits that the Examiner has fallen well short of their burden in making the pending obviousness rejections based on the combination of Takayama, Shimoda, Forbes and Kugler.

There is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Takayama, Shimoda, Forbes and Kugler or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official

Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be modified in the manner asserted in the Official Action, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

Initially, as noted above, Takayama does not teach an IC label or a container. Further, Takayama does not appear to disclose an antenna for an integrated circuit of an IC label or a container.

The Official Action concedes that Takayama does not teach "the IC label comprising a contactless thin film integrated circuit" (page 8, Paper No. 20070722). The Official Action relies on Forbes to allegedly teach this feature. Without any specific references to Takayama or Forbes in support and without statements which establish the level of ordinary skill in the art at the time of the present invention, the Official Action asserts that "it would have been obvious ... to modify Takayama to include a contactless thin film integrated circuit as in Forbes in order to allow the integrated circuit to be used for applications such as RFID tags" (*Id.*). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

The logic presented in the Official Action is circular in that the reason provided to modify Takayama is to provide RFID tags; however, nothing in Forbes indicates that RFID tags could or should be used in a device such as Takayama. Although Forbes

discloses an electronic label including an RFID layer, the Applicant respectfully submits that the Official Action has not demonstrated why one of ordinary skill in the art at the time of the present invention would have had a reason to apply the electronic label including an RFID layer of Forbes to the liquid crystal display device, portable telephone, and portable book of Takayama.

Also, the Official Action concedes that Takayama does not teach "the antenna in a same layer as the gate electrode," "the antenna with the same material as the gate electrode" and "the antenna comprising a conductive paste" (Id.). The Official Action relies on Kugler to allegedly teach these features (pages 8-9, Id.). Without any specific references to Takayama or Kugler in support and without statements which establish the level of ordinary skill in the art at the time of the present invention, the Official Action asserts that "it would have been obvious ... to add an antenna in the same layer as the gate electrode make the antenna with the same material as the gate electrode or a conductive paste to Takayama in order to provide an identification device with an active antenna that can be deposited on a substrate with conventional printing methods" (page 9, Id.). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

Takayama's antenna and gate electrode are not provided over the same substrate. The Official Action does not explain why one of ordinary skill in the art at the time of the present invention would have had a reason to combine or substitute Kugler's antenna deposited on a substrate with conventional printing methods with Takayama's antenna.

Further, even assuming a reason to combine the references could be found, the Official Action has not given any indication that one with ordinary skill in the art at the time of the present invention would have had a reasonable expectation of success when combining Takayama, Forbes and Kugler.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify Takayama, Shimoda, Forbes and Kugler or to combine reference teachings to achieve the claimed invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects dependent claim 17 as obvious based on the combination of Takayama, Shimoda and U.S. Publication No. 2002/0027247 to Arao. The Official Action rejects dependent claim 22 as obvious based on the combination of Takayama, Shimoda, Forbes, Kugler and Arao.

Please incorporate the arguments above with respect to the deficiencies in Takayama, Shimoda, Forbes and Kugler. Arao does not cure the deficiencies in Takayama, Shimoda, Forbes and Kugler. The Official Action relies on Arao to allegedly teach the features of the dependent claims. Specifically, the Official Action relies on Arao to allegedly teach a protective film of DLC provided on a thin film integrated circuit (page 11, Paper No. 20070722). However, Takayama, Shimoda, Forbes, Kugler and Arao, either alone or in combination, do not teach or suggest the following features or that Takayama, Shimoda, Forbes and Kugler should be modified to include any of the following features: a thin film integrated circuit comprising, among other features, a memory comprising a first semiconductor film over an insulating film, and a transistor comprising a second semiconductor film, a gate insulating film, and a gate electrode which are provided over the insulating film; an IC label comprising the thin film integrated circuit; or a container comprising the thin film integrated circuit. Also, Arao

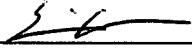


does not explain why one of ordinary skill in the art at the time of the present invention would have had a reason to apply the electronic label including an RFID layer of Forbes to the liquid crystal display device, portable telephone, and portable book of Takayama; or why one of ordinary skill in the art at the time of the present invention would have had a reason to combine or substitute Kugler's antenna deposited on a substrate with conventional printing methods with Takayama's antenna. Since Takayama, Shimoda, Forbes, Kugler and Arao do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

New dependent claims 61 and 62 have been added to recite additional protection to which the Applicant is entitled. The features of claims 61 and 62 are supported in the present specification, for example, by page 13, line 28, through page 14, line 4, and Figure 4B. For the reasons stated above, the Applicant respectfully submits that new claims 61 and 62 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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